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EXAMINER

FOWLKES, ANDRE R

ART UNIT	PAPER NUMBER
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2122

DATE MAILED: 01/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/762,607

Applicant(s)

ENDRES, RUDIGER

Examiner

Andre R. Fowlkes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) ✓
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Claims 1-13 are pending.
2. Claims 1-13, amended or added via a Preliminary Amendment received on 02/08/01, have been examined.

### ***Specification***

3. The abstract of the disclosure is objected to because "(Figure 2)" should be omitted on line 12. Correction is required. See MPEP § 608.01(b).
4. The disclosure is objected to because of the following informalities:
  - Acknowledgement has been made of the continuing data claimed but it is not listed in the beginning of the specification.
  - "temporarily switches" should be -- temporarily switch -- on page 3, line 27.

Appropriate correction is required.

### ***Claim Objections***

5. Claim 13 is objected to because of the following informalities: "installation,:" should be -- installation: -- at line 2. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 7-9, and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith, U.S. Patent No. 5,129,080.

As per claim 1, Smith discloses computer software used to control a distributed system of computers, **comprising: a control computer to control** the distributed system of computers, **said control computer comprising: a memory to store control software and work data, said memory comprising a plurality of memory areas, specific control software being allocated to each said memory area, and in that said control software of one of said plurality of memory areas is declared to be active control software and said control software of other memory areas is declared to be passive control software, so that said control computer controls said distributed system according to said active control software** (col. 2 lines 4-8, "This invention provides a mechanism to organize the computer software in such a way that its recovery from failure ... occurs before the failure becomes operationally visible.", and col. 2 lines 25-34, "Each module is in fact two copies of the code and data-space ... one of the copies, called the Primary Address Space (PAS), maintains actual state data. The other copy (is) called the Standby Address Space (SAS) ... The Availability Management Function (AMF) controls the allocation of PAS and SAS components to the processors. When the AMF detects an error, a SAS becomes PAS and the original PAS is terminated").

As per claim 2, the rejection of claim 1 is incorporated and further Smith discloses that **specific work data, which are stored by said memory, are allocated to each control software package, said work data allocated to said active control software being declared to be active work data and said other work data are declared to be passive work data, so that said control computer controls said distributed system of computers according to said active control software and said active work data** (col. 2 lines 25-28, "Each module is in fact two copies of the code and data-space... one of the copies, called the Primary Address Space (PAS), maintains actual state data. The other copy (is) called the Standby Address Space (SAS)).

As per claim 3, the rejection of claim 2 is incorporated and further Smith discloses that **said memory comprises two memory areas to which specific control software and specific work data are in each case allocated** (col. 4 lines 7-8, "Two complete copies of the modules are loaded into independent address spaces").

As per claim 4, the rejection of claim 3 is incorporated and further Smith discloses that **said two memory areas comprise identical control software and identical work data, and, in the event of a fault during control of the distributed computer system, said control computer switches over to and activates previously passive control software and previously passive work data and deactivates said previously active control software and said previously active work data, in order to subsequently control said distributed computer system according to newly activated control software and newly activated work data** (col. 2 lines 25-34, "Each module is in fact two copies of the code and data-space ... one of the copies, called the

Primary Address Space (PAS), maintains actual state data. The other copy (is) called the Standby Address Space (SAS) ... The Availability Management Function (AMF) controls the allocation of PAS and SAS components to the processors. When the AMF detects an error, a SAS becomes PAS and the original PAS is terminated”).

As per claim 7, the rejection of claim 3 is incorporated and further Smith discloses that **during re-installation of control software, said control computer continues to control** the distributed system **according to said active control software** (Figure 1 shows a temporal description of the re-installation and re-configuration of the control software that occurs after a failure is detected. The temporal description shows that the re-installation and re-configuration of the software is completed in a sufficient time span as to allow for the distributed system to remain available through out the process).

As per claim 8, the rejection of claim 3 is incorporated and further Smith discloses that **during re-installation of work data, said control computer temporarily switches to said passive memory area containing said passive control software, in order to install a new work database therein** (col. 6 lines 53-55, “FIG. 3D shows what happens when the PAS (active control software address space) fails... (and the) SAS (passive control software address/data space) is loaded and initialized).

As per claim 9, the rejection of claim 3 is incorporated and further Smith discloses that **during a changeover from said active memory area and corresponding control software and corresponding work data to said other**

**memory area and corresponding control software and corresponding work data, said control computer evaluates, with reference to stored control information, whether only said control software or else said work data or else a further control computer are affected by said changeover and, depending on this evaluation, automatically initiates a restoration of control of the distributed system** (col. 5 lines 52-55, "The group manager (control computer) ... coordinates the detection (and evaluation) and recovery of all failures within the group that do not require attention at a system level", other types of errors are evaluated and handled accordingly).

As per claim 11 Smith discloses a **method for operating** a distributed system **comprising a control computer, comprising the steps of: storing control software in a repetitive redundant manner into different memory areas of a memory within said control computer; declaring controlled software of one memory area as an active control software; declaring control software of other memory area as passive control software; controlling the distributed system by said control computer from said active control software** (col. 2 lines 25-28, "Each module is in fact two copies of the code (control software) and data-space... one of the copies, called the Primary Address Space (PAS), maintains actual state data. The other copy (is) called the Standby Address Space (SAS)).

As per claim 12, the rejection of claim 11 is incorporated and further Smith discloses **the steps of: storing work data in a repetitive redundant manner into said memory; allocating specific work data to each control software; declaring work data allocated to said active control software as active work data; and**

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**declaring work data being allocated to said passive control software as passive work data; said step of controlling** the distributed system **further comprising the step of controlling said distributed system from said active work data** (col. 2 lines 25-28, "Each module is in fact two copies of the code and data-space (work data)... one of the copies, called the Primary Address Space (PAS), maintains actual state data. The other copy (is) called the Standby Address Space (SAS)).

As per claim 13, the rejection of claim 12 is incorporated and further Smith discloses **the steps of, in the event of a fault during control of** the distributed system: **activating said passive control software and said passive work data, respectively creating newly active control software and work data; deactivating said active control software and said active work data, respectively creating newly passive control software and work data; and controlling said distributed system by said control computer from said newly active control software and said newly active work data** (col. 2 lines 25-34, "Each module is in fact two copies of the code and data-space ... one of the copies, called the Primary Address Space (PAS), maintains actual state data. The other copy (is) called the Standby Address Space (SAS) ... The Availability Management Function (AMF) controls the allocation of PAS and SAS components to the processors. When the AMF detects an error, a SAS becomes PAS and the original PAS is terminated").

***Claim Rejections - 35 USC § 103***



7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith, U.S. Patent No. 5,129,080 in view of Wei, IEEE Publication No. 0-7803-3682-8/96 (Art of Record).

As per claim 5, the rejection of claim 4 is incorporated and further Smith discloses that **said control computer switches over to and activates said previously passive control software and said previously passive work data and deactivates said previously active control software and said previously active work data** (col. 2 lines 25-34, "Each module is in fact two copies of the code and data-space ... one of the copies, called the Primary Address Space (PAS), maintains actual state data. The other copy (is) called the Standby Address Space (SAS) ... The Availability Management Function (AMF) controls the allocation of PAS and SAS components to the processors. When the AMF detects an error, a SAS becomes PAS and the original PAS is terminated").

Smith doesn't explicitly disclose **a menu-driven operating intervention**.

However, Wei, in an analogous environment, discloses **a menu-driven operating intervention** (section 3.1.4, lines 7-9, "From such a GUI, a network

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administrator will be able to perform configuration, connection and fault management activities").

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of Wei into the system of Smith to have a menu-driven operating intervention. The modification would have been obvious because one of ordinary skill in the art would want to use a menu-driven interface in order have an interface that is easy to understand and use.

As per claim 10, the rejection of claim 2 is incorporated and further Smith doesn't explicitly disclose that **said control computer comprises an input device to enter control information which declares control software and work data to individual memory areas of said memory to be either active or passive.**

However, Wei, in an analogous environment discloses that **said control computer comprises an input device to enter control information which declares control software and work data to individual memory areas of said memory to be either active or passive** (section 3.1.4, lines 7-9, "From such a GUI, a network administrator will be able to perform configuration, connection and fault management activities").

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of Wei into the system of Smith to have an input device to enter control information. The modification would have been obvious because one of ordinary skill in the art would want to give users of the

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system a way of controlling and/or optimizing the system by using an input device to enter control information.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith, U.S. Patent No. 5,129,080 in view of Oono, U.S. Patent No. 5,548,710.

As per claim 6, the rejection of claim 4 is incorporated and further Smith doesn't explicitly disclose that **said control computer temporarily transfers to a pause condition before switching over to said previously passive control software and said previously passive work data.**

However, Oono, in an analogous environment discloses that **said control computer temporarily transfers to a pause condition before switching over to said previously passive control software and said previously passive work data** (col. 14 lines 31-36, "upon occurrence of trouble in said active ISDN communication adapter, (the control computer transfers to an) ... interruption of transmission (a pause condition), ... and (then) activating said stand-by ISDN communication adapter to operate as the active ISDN communication adapter").

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of Oono into the system of Smith to have the control computer transfer to a pause condition before switching over to the previously passive control software. The modification would have been obvious because one of ordinary skill in the art would want to pause before switching in

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order to be certain that all of the effects of the error are apparent to the system before beginning error recovery.

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre R. Fowlkes whose telephone number is (703)305-8889. The examiner can normally be reached on Monday - Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (703)305-4552. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.



**TUAN DAM  
SUPERVISORY PATENT EXAMINER**

ARF